

LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) A substrate for attaching an array of biological or chemical analytes, said substrate comprises:

- a) a porous inorganic layer, derived from individual particles, ~~adhered to a flat, rigid, non-porous, inorganic understructure; and~~
- b) said porous inorganic layer having a plurality of interconnected voids of a predetermined mean size dispersed therethrough, and having void channels that extend through to an exposed ~~a top~~ surface of said porous inorganic layer;
- c) a glass interlayer which has a softening point that is lower than a softening point of the individual particles used to derive said porous inorganic layer; and
- d) a flat, rigid, non-porous, inorganic understructure, wherein said glass interlayer is disposed between said porous inorganic layer and said flat, rigid, non-porous, inorganic understructure.

2. (Currently Amended) The substrate according to claim 1, further comprising a uniform coating of a binding agent over at least a part of a [[the]] surface area of said void channels [[voids]] and said exposed [[top]] surface of said porous inorganic layer.

Claim 3 (Canceled)

4. (Currently Amended) The substrate according to claim 2 [[3]], wherein said binding agent is gamma-aminopropylsilane.

Claims 5-8 (Canceled)

9. (Previously Presented) The substrate according to claim 1, wherein said porous inorganic layer is a material that is transparent to light.

Claims 10-12 (Canceled)

13. (Previously Presented) The substrate according to claim 1, wherein said porous inorganic layer has a thickness of about 5 μm .

14. (Previously Presented) The substrate according to claim 1, wherein said particles have a predetermined mean size in the range of about 3.5 μm .

Claim 15 (Canceled)

16. (Previously Presented) The substrate according to claim 1, wherein said voids have a predetermined mean size in the range of about 0.3 μm to about 20 μm .

Claims 17-19 (Canceled)

20. (Original) The substrate according to claim 1, wherein said porous inorganic layer is characterized as having a microstructure that produces a sensitivity of fluorescent molecules of at least one order of magnitude greater than that of a comparable, non-porous substrate.

21. (Original) The substrate according to claim 1, wherein said porous inorganic layer has a microstructure derived from at least a partial sintering of said individual particles.

Claims 22-37 (Canceled)

38. (Currently Amended) A substrate for attaching an array of biological or chemical analytes, said substrate comprises:

- a) a flat, rigid, non-porous, inorganic understructure;
- b) a tape-casted porous inorganic layer, derived from ~~one or more tape-casted frit layers of~~ individual particles, adhered to said flat, rigid, non-porous, inorganic understructure; and
- c) said tape-casted porous inorganic layer having a plurality of interconnected voids of a predetermined mean size dispersed therethrough, and having void channels that extend through to an exposed ~~a top~~ surface of said tape-casted porous inorganic layer.

39. (New) The substrate according to claim 38, further comprising a tape-casted glass interlayer disposed between said tape-casted porous inorganic layer and said flat, rigid, non-porous, inorganic understructure.